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EXAMINER

WU, YICUN

ART UNIT PAPER NUMBER

2165

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/685,288

Applicant(s)

FERA ET AL.

Examiner

Yicun Wu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 and 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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III. DETAILED ACTION

1. Claims 12-19 and 26-29 are presented for examination.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 12-19 and 26-29 are rejected under 35 U.S.C. 101 because the claims are directed to a non-statutory subject matter, specifically, directed towards an data structure.

The Supreme Court has repeatedly held that abstractions are not patentable. "An idea of itself is not patentable". "Rubber Tip Pencil Co. V. Howard", 20 Wall.498, 07. Phenomena of nature, though just discovered, mental processes, abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work "Gottschalk v. Benson", 175 USPQ 673, 675 (S Ct 1972). It is a common place that laws of nature, physical phenomena, and abstract ideas are not patentable subject matter "Parker v. Flook", 197 USPQ 193, 201 (S Ct 1978).

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A method for identifying faults in a plurality of locomotives not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are neither physical "things" nor statutory processes. Applicant's claims are not within any of the statutory classes. "A method for identifying faults in a plurality of locomotives" should define structural and functional interrelationships between data structures or functional parts and a computer system which permit the data functions to be realized, and is statutory.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 12-19 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coiner et al. (U.S. Patent 5,638,273) in view of Palusamy et al. (U.S. Patent No. 5,311,562).

As to Claims 12, 17 and 26, Coiner et al. discloses a method for identifying faults in a plurality of locomotives, the method comprising:

a) collecting from a group of the plurality of locomotives respective locomotive data indicative of each fault logged over a predetermined period of time (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27);

b) classifying respective faults in the collected locomotive data based on the following criteria:

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1) relative frequency of fault occurrence (i.e. incident or trigger) (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27);

2) number of locomotives affected in the group ((Coiner et al. col. 5, lines 30-42); and

3) expected level of reduction in locomotives operational performance;

wherein any of the three criteria comprises a first basis of classification, and a second classification is based on the results of the first classification so that any faults found to be critical, include properties in at least two of the classifications (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27); and

C) storing any faults found to be critical of critical faults (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27).

Coiner et al. does not explicitly teach critical fault and in a database.

Palusamy et al. teaches critical fault (i.e. collecting sample data for assessing operational conditions and for predicting maintenance requirements. Palusamy et al. Col. 4, lines 13-15) and in a database (i.e. common database. Palusamy et al. col. 4, lines 10-33).

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Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Coiner et al. with critical fault and in a database.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Coiner et al. by the teaching of Palusamy et al. because providing critical fault and in a database allows operations and maintenance decisions can be made more effectively and from a greater base of knowledge as taught by Palusamy et al. (col. 3, lines 35-39).

As to Claim 13 and 27, Coiner et al. as modified teaches a method wherein all three criteria are separately considered in sequence and further wherein each classification is based on the results of any previous classification so that the faults found to be critical include properties in all three classifications (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27).

As to Claims 14 and 28, Coiner et al. as modified teaches a method wherein the database of critical faults is used in a process for assigning, priorities to communications of electronic data between a diagnostic service center and a

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plurality of locomotives generally remote relative to each other, the assigned priorities being used for managing the handling of such communications, the electronic data comprising at least respective new locomotive data from selected locomotives, the process comprising:

storing in a database a list of respective cases to be processed (i.e. common database. Palusamy et al. col. 4, lines 30-33);

assigning to each case a respective download priority based on the existence of critical faults in the case (i.e. store data records at frequency) (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27); and

determining each case to be populated next with new locomotive data based at least upon the assigned download priority . (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27).

As to Claims 15, 18 and 29, Coiner et al. as modified teaches a method comprising executing a download of new locomotive data wherein the download of new locomotive data is triggered upon a call from a respective locomotive to the service center (i.e. common database. Palusamy et al. col. 4, lines 30-33), the call identifying occurrence in the respective

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locomotive of one or more faults of the type stored in the critical fault database (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27).

As to Claim 16, Coiner et al. as modified teaches a method comprising prioritizing analysis of locomotive data including critical faults (Coiner et al. Fig. 5 and col. 2, lines 32 - col. 3, line 27).

As to Claim 19, Coiner et al. as modified teaches a system wherein

the call to the service center is automated upon detection in the locomotive of one or more of the faults of the type stored in the critical fault database (Palusamy et al. col. 4, lines 15-33).

Conclusion

5. **THIS ACTION IS MADE FINAL**, Applicant's amendment necessitated the new ground(s) of rejection presented in this office action. Accordingly, *THIS ACTION IS MADE FINAL. See MPEP 706.07(a)*. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory- period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136 (a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply-expire later than SIX MONTHS from the mailing date of this final action.

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Points of contact


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yicun Wu whose telephone number is 571-272-4087. The examiner can normally be reached on 8:00 am to 4:30 pm, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Yicun Wu
Patent Examiner
Technology Center 2100

September 9, 2005


JEFFREY GAFFIN
JESSICA PATENT EXAMINER
TECH CENTER 2100